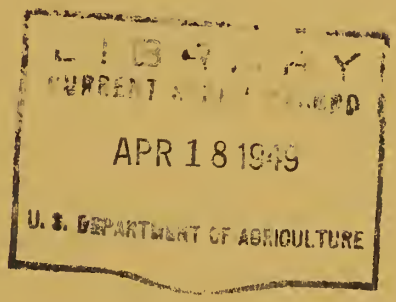
FEDERAL-STATE

COOPERATIVE SNOW SURVEYS and IRRIGATION WATER FORECASTS

for

OREGON

April 1, 1949



by
Division of Irrigation, Soil Conservation Service
United States Department of Agriculture
and
Oregon Agricultural Experiment Station

Data included in this report were obtained by the agencies named above in cooperation with the Oregon State Engineer, U. S. Forest Service, National Park Service and other Federal, State, and local organizations

FEDERAL-STATE COOPERATIVE

SNOW SURVEYS AND IRRIGATION WATER FORECASTS

FOR

OREGON

Report Prepared

by

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Soil Conservation Service
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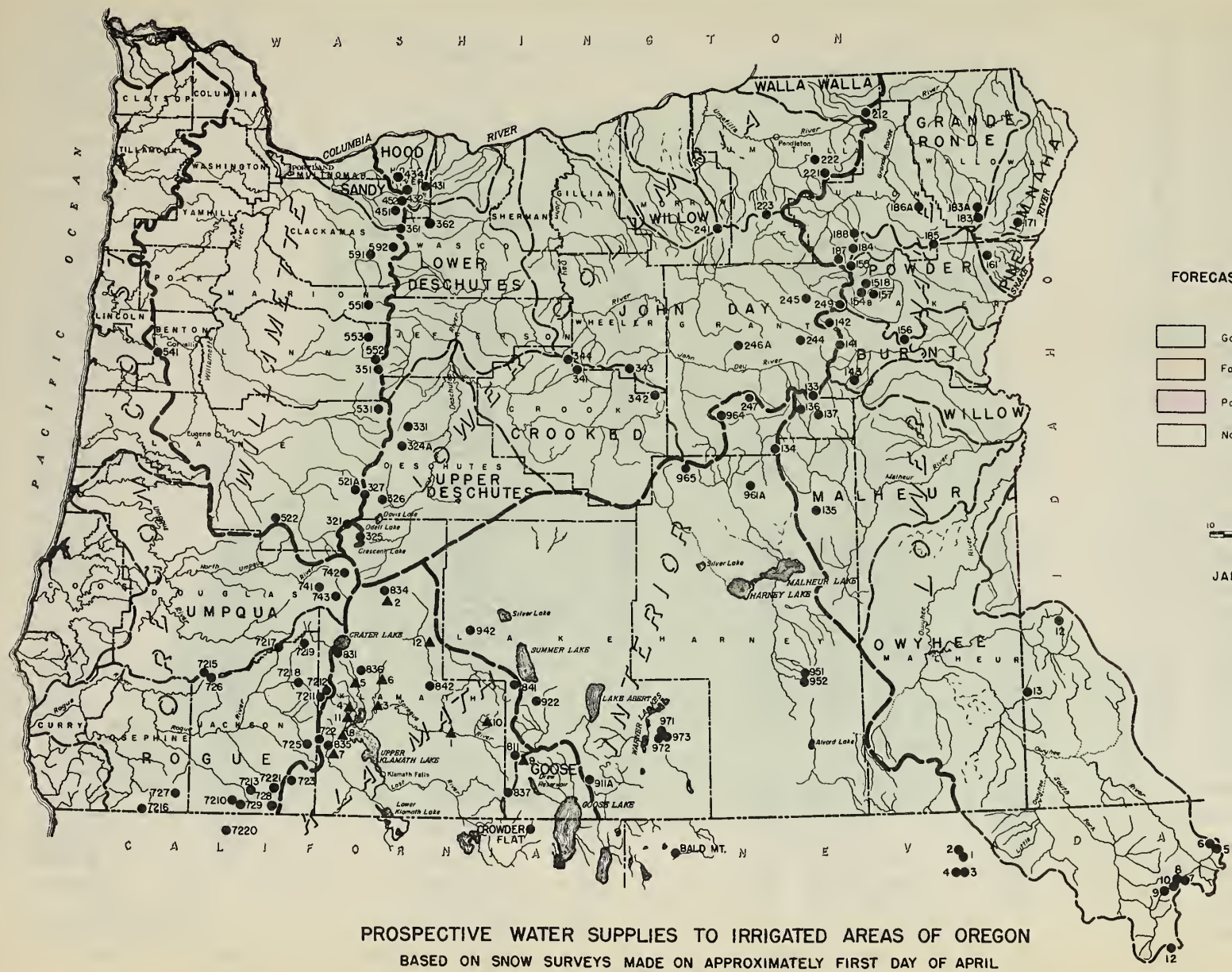
Definition of Terms on Map Following

Good - Runoff prospects normal or better, with sufficient flow for all demands of current season, and in the case of holdover reservoirs, for replacement of evaporation and other natural reservoir losses.

Fair - Subnormal runoff prospects, with some deficiency in meeting demands of current season when holdover storage is not available. If holdover storage available, adequate supply for current demands assured by some depletion of holdover storage.

Deficient - Greatly subnormal runoff prospects with considerable deficiency of water for demands in current season when holdover storage not available. If holdover storage available, runoff prospects are considered poor if very heavy depletions of holdover storage are necessary to meet current demands.



PROSPECTIVE WATER SUPPLIES TO IRRIGATED AREAS OF OREGON

BASED ON SNOW SURVEYS MADE ON APPROXIMATELY FIRST DAY OF APRIL

(Dry Farm Areas or Forest and Range Lands Not Necessarily Included)

7-1-8563

INDEX TO SNOW COURSES

Number	Name	Elev.
	UPPER DOLUMBIA DRAINAGE Lower Snake in Oregon	
	OWYHEE RIVER	
Nev. 6	Big Bend	6800
Nev. 1	Buckskin, Lower	6800
Nev. 2	Buckskin, Upper	8200
952	Fish Creek	7900
Nev. 7	Fry Canyon	6800
Nev. 5	Gold Creek Ranger Sta.	6600
Nev. 4	Granite Peak	8600
Nev. 9	Jack Creek, Lower	7000
Nev. 10	Jack Creek, Upper	7800
Nev. 3	Martin Creek	7000
Nev. 8	Rodeo Flat	7000
Ida. 12	Silver City	6400
951	Silvies	6900
Ida. 13	South Mountain No. 22	6340
Nev. 12	Taylor Canyon	5200
	MALHEUR RIVER	
133	Blue Mountain Spring	5900
137	Crane Prairie	5375
136	Lake Creek	5120
134	Rock Spring	5100
135	Stinking Water	4800
	BURNT RIVER	
143	Barney Creek	5950
141	Blue Mountain Summit	5098
156	Dooley Mountain	5430
142	Tipton	5100
	POWDER RIVER	
155	Anthony Lake	7125
154	Bourne	5800
156	Dooley Mountain	5430
151B	Eilertson Meadows	5400
249	Gold Center	5340
157	Goodrich Lake	6775
184	Summit Springs	6000
185	Taylor Green	5740
	PINE CREEK	
161	Schneider Meadows	5400
	INNAHA RIVER	
171	Coverdale	4250
	GRANDE RONDE RIVER	
183	Aneroid Lake	7480
183A	Aneroid Lake No. 2	7000
155	Anthony Lake	7125
188	Beaver Reservoir	5340
187	Camp Carson	5970
186A	Moss Spring	5850
184	Summit Springs	6000
185	Taylor Green	5740
212	Tollgate	5070

Number	Name	Elev.
	LOWER COLUMBIA DRAINAGE	
	WALLA WALLA RIVER	
212	Tollgate	5070
	UMATILLA RIVER	
222	Emigrant Springs	3925
223	Lucky Strike	5050
221	Meacham	43300
212	Tollgate	5070
	WILLOW CREEK	
241	Arbuckle Mountain	5400
	JOHN DAY RIVER	
241	Arbuckle Mountain	5400
246A	Beech Creek Summit	4800
133	Blue Mountain Spring	5900
141	Blue Mountain Summit	5098
244	Dixie Springs	6650
249	Gold Center	5340
964	Izee Summit	5293
245	Olive Lake	6000
965	Snow Mountain	6300
247B	Starr Ridge	5150
	DESCHUTES RIVER	
326	Caldwell Ranch	4400
321	Cascade Summit	4880
327	Charlton Lake	5750
361	Clear Lake	3500
325	Crescent Lake	4760
343	Derr	5670
351	Hogg Pass	4755
344	Marks Creek	4540
324A	New Dutchman Flat	6400
341	Oohoo Meadows	5200
362	Rock Creek	4200
965	Snow Mountain	6300
342	Tamarack	4800
331	Three Creeks Meadows	5600
	HOOD RIVER	
431	Brooks Meadows	4300
434	Red Hill	4400
432	Tilly Jane-Mt. Hood	6000
	SANDY RIVER	
361	Clear Lake	3500
452	Phlox Point-Mt. Hood	5600
451	Still Creek	3700
	CLACKAMAS RIVER	
592	Clackamas Lake	3400
591	Peavine Ridge	3500

Number	Name	Elev.
	WILLAMETTE RIVER	
551	Breitenbush	2325
321	Cascade Summit	4880
522	Champion	4500
327	Charlton Lake	5750
351	Hogg Pass	4755
531	McKenzie	4800
553	Marion Forks	2730
541	Mary's Peak	3620
552	Santiam Junction	3990
521A	Waldo Lake	5500
	KLAMATH LAKE BASIN	
831	Annie Spring	6018
722	Billie Creek Divide	6000
834	Chemult No. 1	4760
Calif.	Crowder Flat	5200
723	Hyatt Prairie Reservoir	4900
835	Lake of the Woods No. 1	4960
811	Quartz Mountain	5320
7211	Seven Lakes No. 1	6800
7212	Seven Lakes No. 2	6200
837	Strawberry	5600
841	Summer Rim	7200
836	Sun Mountain	5350
842	Taylor Butte	5100
	GOOSE LAKE BASIN	
911A	Camas Creek	5720
811	Quartz Mountain	5320
837	Strawberry	5600

INDEX TO THE CALIFORNIA OREGON
POWER COMPANY SNOW WATER STATIONS

	KLAMATH LAKE BASIN	
1	Beatty	4300
2	Chemult	4761
3	Chiloquin	4187
4	Crystal	4200
5	Fort Klamath	4150
6	Kirk	4533
7	Lake of the Woods	4960
8	Pelican	4200
9	Quartz Mountain	5504
10	Richardson Ranch	4800
12	Yamsey	4600
	GOOSE LAKE BASIN	
9	Quartz Mountain	5504

Number	Name	Elev.
	INTERIOR DRAINAGE	
	SILVER LAKE	
942	Silver Creek	4900
	CHEWAUGAN RIVER	
922	Mill Creek	6200
	HARNEY BASIN	
973	Deer Creek	6670
952	Fish Creek	7900
971	Hart Mountain	6350
961A	Idylwild Park	5200
964	Izee Summit	5293
134	Rock Spring	5100
951	Silvies	6900
965	Snow Mountain	6300
247B	Starr Ridge	5150
	WARNER LAKE	
911A	Camas Creek	5720
	GUANO LAKE	
Nev.	Bald Mountain	6720
972	Guano Creek	6480
	WEST COAST DRAINAGE	
	UMPQUA RIVER	
522	Champion	4500
743	Diamond Lake	5315
726	Goolaway Gap	3000
7215	Goolaway Mountain	3730
742	N.Umpqua near Lake Creek	4215
741	Trap Creek	3800
7217	Whaleback	5140
	ROGUE RIVER	
7216	Althouse	4400
831	Annie Spring	6018
729	Big Red Mountain	6500
722	Billie Creek Divide	6000
725	Fish Lake	4865
726	Goolaway Gap	3000
7215	Goolaway Mountain	3730
727	Grayback Peak	6000
7221	Hobart Lake	5010
723	Hyatt Prairie Reservoir	4900
7210	Little Red Mountain	6500
7220	Soragg Mountain	6200
7211	Seven Lakes No. 1	6800
7212	Seven Lakes No. 2	6200
7219	Silver Burn	3720
728	Siskiyou Summit	4630
7218	South Fork Canal	3500
7213	Wagner Butte	6900
7217	Whaleback	5140

FINAL WATER SUPPLY OUTLOOK

Oregon's 1949 water supply outlook is "good" throughout the state with prospects equal to the excellent supplies of 1943 and 1946 in most areas. Deficiencies or shortages are not to be expected anywhere in the state if normal conditions of snow-melt and runoff prevail. New records of runoff will be established in scattered areas with unusually high flow to be expected in most places.

Mountain snow cover has broken previous April 1 records at 35 of 111 snow courses, especially in the Northern Cascades. Water content of the snow is now above average on 97 percent of all measured snow courses and is greater than last year on 83 percent of these courses. Snow-stored water, as of April 1, is 62 percent above average throughout the state and 45 percent greater than last year.

In general, the snow pack above 5000 feet elevation is 6 percent greater than it was one month ago, 46 percent above average and 38 percent greater than last year. Low elevation snow lying between 2000 and 5000 feet is only 8 percent less than it was last month, 117 percent above average and 64 percent greater than last year. Snow and water supplies for individual streams are discussed in detail beginning on page 21.

Record stream flows are expected to occur on Walla Walla, Crooked, Upper Deschutes, White, and Clackamas Rivers with high seasonal flows to be expected on many other streams including North and South Santiam Rivers, Sandy, Applegate, Hood, and Umatilla Rivers (See page 3 for a detailed statement of these expected high flows).

Watershed soils are believed wetter than average - a condition favoring increased runoff from the snow pack. On the Owyhee watershed and on a part of the Crooked River area, the soils are not so well wetted. Soil moisture in valley soils is very good although recent drying winds are causing some demand for irrigation water in places.

Reservoired water supplies are, in general, "good" to "excellent." Total water stored in all reservoirs is 3 percent greater than at this time last year, 17 percent less than in 1947 and 20 percent less than average. Good inflows are expected in all reservoirs. Hundreds of small privately owned reservoirs scattered throughout the state are already full or will have a good inflow. Present storage in 26 larger reservoirs of the state is 57 percent of capacity as compared with the average storage which is 72 percent of capacity.

Tabulated streamflow forecasts are presented on pages 4 and 5. Present reservoir storage compared with past storage is listed on page 7. Detailed reports of the eight local water forecast committee meetings are given beginning on page 21.

The following table compares water content of the snow about April 1, 1949 with that of the same date in 1948 and 1947 and with the average.

Drainage	1949 water content of snow as percent of that in 1948	1947	Average
Owyhee	155	533	153
Malheur	126	271	143
Burnt	131	458	149
Powder	118	171	134
Pine Creek	146	194	144
Imnaha	97	102	109
Grande Ronde	112	153	139
Walla Walla	131	208	170
Umatilla	124	280	175
Willow Creek	129	435	166
John Day	102	195	133
Crooked	110	332	148
Deschutes	147	279	171
White	202	2228	256
Hood	196	1731	304
Sandy	161	270	203
Clackamas	203	445	242
Willamette	158	327	217
Umpqua	127	346	160
Upper Rogue	154	228	147
Applegate	188	236	160
Illinois	244	611	147
Klamath Lake	156	244	146
Goose Lake	172	862	215
Silver Lake	100	100	0
Chewaucan	233	877	223
Warner Lake	165	604	167
Harney Lake	99	222	122
Guano Lake	260	-	254

RECORD FLOW TO BE SET ON MANY STREAMS

The April to September, 1949, water yields of several streams in the state are expected to exceed any previously published flow records. Streams which are expected to set new records for this six month period are:

Stream and Station	1949 Forecast	Previous Record	Year of Record
	1000 A.Ft.	1000 A.Ft.	
S. Fk. Walla Walla R. nr Milton	93	84.4	1933
Crooked River nr Post	190	185.5	1943
Deschutes R. below Snow Creek	90	85.2	1943
Crane Prairie Reservoir Inflow	175	166.3	1943
Squaw Creek nr Sisters	68	67.6	1913
White River below Tygh Valley	280	241.0	1943
Clackamas R. nr Big Bottom	260	217.0	1937

Several other streams will approach record yields this season. These high seasonal flows are likely to be accompanied by high peak flows approaching or exceeding previous spring peak stages established during periods of snow course records. Among streams that may be in this category are: Crooked River near Post, North and South Santiam Rivers, and Sandy River below Bullrun River. The following additional streams, among others, may have relatively high spring peaks: Umatilla, White, Hood, West Fork of Hood, Clackamas and Applegate Rivers. Whether or not damaging peak flows occur on these and many other streams is dependant on climatic conditions during the near future. High temperatures, strong winds and heavy precipitation at higher altitudes for several days would most likely induce damaging flows. Relatively dry weather without exceptional temperature rises, on the other hand, would permit orderly snow melt and runoff without necessarily producing damaging high water on most streams.

FINAL STREAMFLOW FORECASTS, APRIL 1, 1949

The following summarized runoff forecasts are based on mountain snow cover and on the assumption that precipitation and temperature during the runoff season will be approximately normal. Appreciable deviations from normal of temperature and/or precipitation, especially during April, May or June, will correspondingly modify these forecasts.

BASIN AND STREAM	Apr.-Sept., Inc. Streamflow in Thous. A. F.				
	Forecast	Measured Runoff*			10-yr. Avg.
	1949	1948	1947	1946	1938-47
Columbia R. at The Dalles[c]	118000.0[c]	127590.0	98488.0	106471.0	85740.0
NORTHCENTRAL OREGON					
Hood River, W. Fk. near Dee	225.0	a	149.8	164.7	131.8
White R. below Tygh Valley	280.0	a	103.1	181.0	123.1
UMATILLA-WALLA WALLA					
Walla Walla R. So. Fk. nr. Milton	93.0	a	62.7	75.0	62.4
Umatilla R. near Gibbon	112.0	a	53.9	103.5	75.6
Umatilla R. at Pendleton	225.0	a	96.4	194.0	145.1
McKay Ck. above McKay Reservoir	35.0	a	16.1	20.9	25.1
NORTHEASTERN OREGON					
Grande Ronde R. nr. LaGrande	260.0	366.2	118.8	179.6	151.1
Catherine Ck. near Union	90.0	109.9	60.9	76.0	66.3
Bear Ck. near Wallowa	70.0	97.4	69.6	83.4	65.8
Lostine R. near Lostine	130.0	153.5	127.7	149.7	117.5
Hurricane Ck. near Joseph	45.0	59.4	49.9	54.3	43.0
Wallowa R. E. Fk. plus Power Pl.	11.5	a	10.4	13.3	11.1
Imnaha River at Imnaha	330.0	a	228.1	320.5	286.6
Powder River at Salisbury	70.0	78.6	43.6	76.4	57.8
Burnt R. nr. Hereford (Natural Flow)	39.0	62.7	20.2	52.8	35.5
EASTERN OREGON					
Malheur R. Mid. Fk. nr. Drewsey	75.0	74.0	34.1	83.6	75.3
Malheur R. N. Fk. at Beulah	65.0	64.5	32.7	68.9	59.8
Owyhee R. above Owyhee Reservoir	600.0	257.3	176.6	467.3	421.2
John Day R. at Prairie City, combined with Power Canal	50.0	a	38.6	62.2	46.6
John Day R. Mid. Fk. at Ritter	140.0	a	93.1	140.2	106.4
John Day R. No. Fk. near Dale	300.0	a	216.5	267.8	217.9
Strawberry Ck. nr. Prairie City	8.2	a	7.9	9.9	8.0
HARNEY BASIN					
Trout Creek near Denio	7.0	a	3.8	7.3	9.2
Silvies R. near Burns	90.0	133.1	47.7	99.6	88.6
Donner und Blitzen R. nr. Frenchglen	60.0	a	38.9	51.0	62.8

* - Discharge data from preliminary records of U. S. Geological Survey and Oregon State Engineer

a - Discharge data not available

b - April-June rather than April-September

c - Forecast by Boise Office of Soil Conservation Service

Streamflow Forecasts, April, 1949 (Cont'd.)

BASIN AND STREAM	Apr.-Sept. Inc. Streamflow in Thous. A. F. Forecast 1949	Measured Runoff* 1948	1947	1946	10-yr. Avg. 1938-47
CENTRAL OREGON					
Ochoco Reservoir Net Inflow	30.0	72.3	8.2	46.4	19.9
Crooked River nr. Post	190.0	a	40.6	137.3	102.2
Crescent Lake Net Inflow	25.0	a	19.2	22.2	15.7
Little Deschutes R. nr. Lapine	100.0	a	64.9	114.1	68.2
Odell Ck. near Crescent	36.0	a	28.8	32.6	24.8
Deschutes R. below Snow Creek	90.0	a	64.5	78.2	48.6
Crane Prairie Reservoir Inflow	175.0	a	123.4	153.6	97.3
Deschutes R. at Pringle Falls	350.0	a	284.8	297.7	258.0
Deschutes R. at Benham Falls	620.0	a	495.1	547.5	449.6
Tumalo Creek and C.S. Canal	62.0	a	49.1	60.9	43.4
Squaw Creek near Sisters	68.0	a	45.7	63.5	44.0
SOUTHCENTRAL OREGON					
Chewaucan R. near Paisley	75.0[b]	74.5[b]	32.9[b]	78.3[b]	64.6[b]
Deep Creek above Adel	68.0[b]	70.8[b]	29.1[b]	57.6[b]	59.4[b]
KLAMATH BASIN					
Sprague R. above Chiloquin	200.0	239.9	105.5	261.9	231.5
Williamson R. below Sprague R.	400.0	356.3	223.8	415.4	377.0
Upper Klamath Lake Net Inflow	530.0	474.8	326.2	536.7	484.0
Clear Lake Res. Net Inflow	83.9	70.2	15.9	33.9	41.3
Gerber Res. Net Inflow	48.5	21.9	4.3	21.1	21.3
SOUTHERN OREGON					
Applegate R. near Ruch	205.0	a	64.6	129.6	116.4
Hyatt Res. Net Inflow	7.5	9.1	2.1	5.5	5.3
Fourmile Lake Net Inflow	9.0	11.0	6.0	8.7	6.7
Little Butte Ck. N.Fk. below Fish Lake (Natural Flow)	16.0	a	10.1	15.7	13.2
Rogue R. So.Fk. above Imnaha Ck.	78.0	a	41.4	63.5	49.6
Rogue R. Mid.Fk. plus Power Canal	94.0	a	63.4	80.2	68.3
Rogue R. N.Fk. above Prospect	377.0	343.7	248.8	370.4	282.6
Rogue R. below So.Fk.	836.0	a	539.9	735.4	613.3
Clearwater River above Trap Ck.	64.0	a	61.4	65.7	58.5
No. Umpqua R. below Lake Creek	168.0	a	157.0	179.1	150.2
No. Umpqua R. at Toketee Falls[d]	405.0	a	348.4	407.3	340.9
WILLAMETTE VALLEY					
Willamette R. Mid.Fk. at Eula	1200.0	a	737.1	830.3	704.1
McKenzie R. at McKenzie Bridge	760.0	a	501.2	595.2	500.3
McKenzie River near Vida	1700.0	a	1084.2	1227.8	1054.8
Clackamas R. at Big Bottom	260.0	a	a	178.9	143.3[e]

* - Discharge data from preliminary records of U. S. Geological Survey and Oregon State Engineer

a - Discharge data not available

b - April-June rather than April-September

c - Forecast by Boise Office of Soil Conservation Service

d - Gaging station discontinued

e - 1938-46 only

OREGON STREAMFLOW FORECASTS, APRIL 1, 1949

The following forecasts are for the period April 1 through July 1 and will be of value both to irrigationists and hydro-power generating interests:

BASIN AND STREAM	Apr.-July, Forecast	Inc. Streamflow in Thous A. F. Measured Runoff			10-yr. Avg.
	1949	1948	1947	1946	1938-47
NORTHCENTRAL OREGON					
Hood River, W. Fk. near Dee	200.0	a	91.6	143.8	110.6
White R. below Tygh Valley	256.0	a	88.1	165.1	109.6
UMATILLA-WALLA WALLA					
Walla Walla R.So.Fk.nr.Milton	79.0	a	49.0	62.4	47.5
Umatilla R. at Pendleton	220.0	a	92.2	189.1	140.8
McKay Ck.above McKay Reservoir	34.0	a	16.1	20.8	24.8
NORTHEASTERN OREGON					
Wallowa R.E.Fk.plus Power Pl.	9.0	a	8.5	10.8	8.9
Powder River at Salisbury	60.0	76.2	42.7	74.9	56.3
CENTRAL OREGON					
Little Deschutes R.nr.Lapine	90.0	a	56.0	102.5	55.0
Deschutes R. at Benham Falls	425.0	a	331.8	370.0	307.0
Deschutes R. at Pringle Falls	235.0	a	181.4	181.1	164.3
KLAMATH BASIN					
Williamson R.below Sprague R.	320.0	293.4	169.5	349.1	312.2
Upper Klamath Lake Net Inflow	400.0	376.6	221.6	429.9	382.9
SOUTHERN OREGON					
Rogue R.So.Fk.above Imnaha Ck.	65.0	a	34.6	54.1	42.2
Rogue R.Mid.Fk.plus Power Canal	72.0	a	49.3	63.9	53.8
Rogue R.N.Fk.above Prospect	329.0	289.7	199.5	313.8	235.4
Rogue R.below So. Fk.	680.0	a	423.6	602.7	495.0
No.Umpqua R. at Toketee Falls	325.0	a	262.9	315.9	259.8
WILLAMETTE VALLEY					
Clackamas R. at Big Bottom	220.0	a	a	143.7	114.9

STATUS OF RESERVOIR STORAGE, April 1, 1949

BASIN and STREAM	RESERVOIR	USABLE CAPACITY (Thous.A.F.)	THOUS.A.F. IN STORAGE ABOUT APRIL 1 1949	1948	1947	1946	10-yr.avg. 1938-47
		UPPER COLUMBIA DRAINAGE LOWER SNAKE IN OREGON					
Owyhee	Antelope	36.5	12.0	N.R.	11.0	15.0	18.2[d]
	Owyhee	715.0	356.7	397.9	595.4	681.6	631.7
Malheur	Warm Springs	191.0	66.0	42.3	137.7	141.1	147.0
	Agency Valley	60.0	55.0	44.4	52.7	54.6	54.1
	Willow Creek	26.0	7.0	8.2	N.R.	N.R.	7.1[e]
Burnt	Unity	25.2	10.8	12.0	24.0	14.8	17.0
Powder	Thief Valley	17.4	10.4	17.4	17.8	18.1	17.1
Grande Ronde	Wallowa Lake	40.9	17.8	17.8	24.4	12.2	22.8
		LOWER COLUMBIA DRAINAGE					
Umatilla	McKay	74.0	59.9	71.0	66.3	62.0	57.9
	Cold Springs	50.0	45.0	50.0	50.0	49.0	48.4
Deschutes	Ochoco	46.0	32.1	29.0	32.2	43.6	27.1
	Crescent Lake	80.0	54.0	48.6	52.1	33.4	38.2
	Crane Prairie	50.0	39.0	30.5	41.4	39.6	35.9
	Wickiup	180.0	Full	149.8	97.8	70.5	50.7[f]
	Rock Creek	1.4	Full	1.4	1.4	1.4	1.2[f]
Willamette	Cottage Grove	30.1[b]	N.R.	19.9[b]	20.6	16.2	18.3[g]
	Fern Ridge	94.2[b]	N.R.	65.0[b]	68.0	56.5	54.0[h]
		INTERIOR DRAINAGE					
Silver Lake	Thompson Valley	17.4	N.R.	N.R.	8.2	4.0	7.3[g]
		WEST COAST DRAINAGE					
Rogue	Fish Lake	7.7	5.1	3.6	4.6	4.2	4.9
	Fourmile Lake[a]	16.0	7.3	2.4	5.1	5.7	7.6
	Emigrant Gap	8.2	Full	8.2	6.9	8.2	7.8
	Hyatt Prairie[a]	16.0	8.1	3.8	3.4	4.2	7.2
Klamath	Upper Klamath Lk	584.0[c]	376.0	389.3	407.8	385.1	456.2
	Gerber	94.0	32.8	29.0	42.5	51.9	57.6
	Clear Lake	440.2	172.3	152.4	226.7	282.4	276.1
Goose Lake	Cottonwood	4.1	0	1.2	2.4	0	1.5
	Drew	62.5	46.3	29.0	35.3	46.3	49.5

N.R. - No Report

a - By ditch to Rogue River side from Klamath Drainage

b - Storage space reserved for flood control

c - Based on gage zero elevation of 4135.0

d - Excl. '41, '42, '46, '47

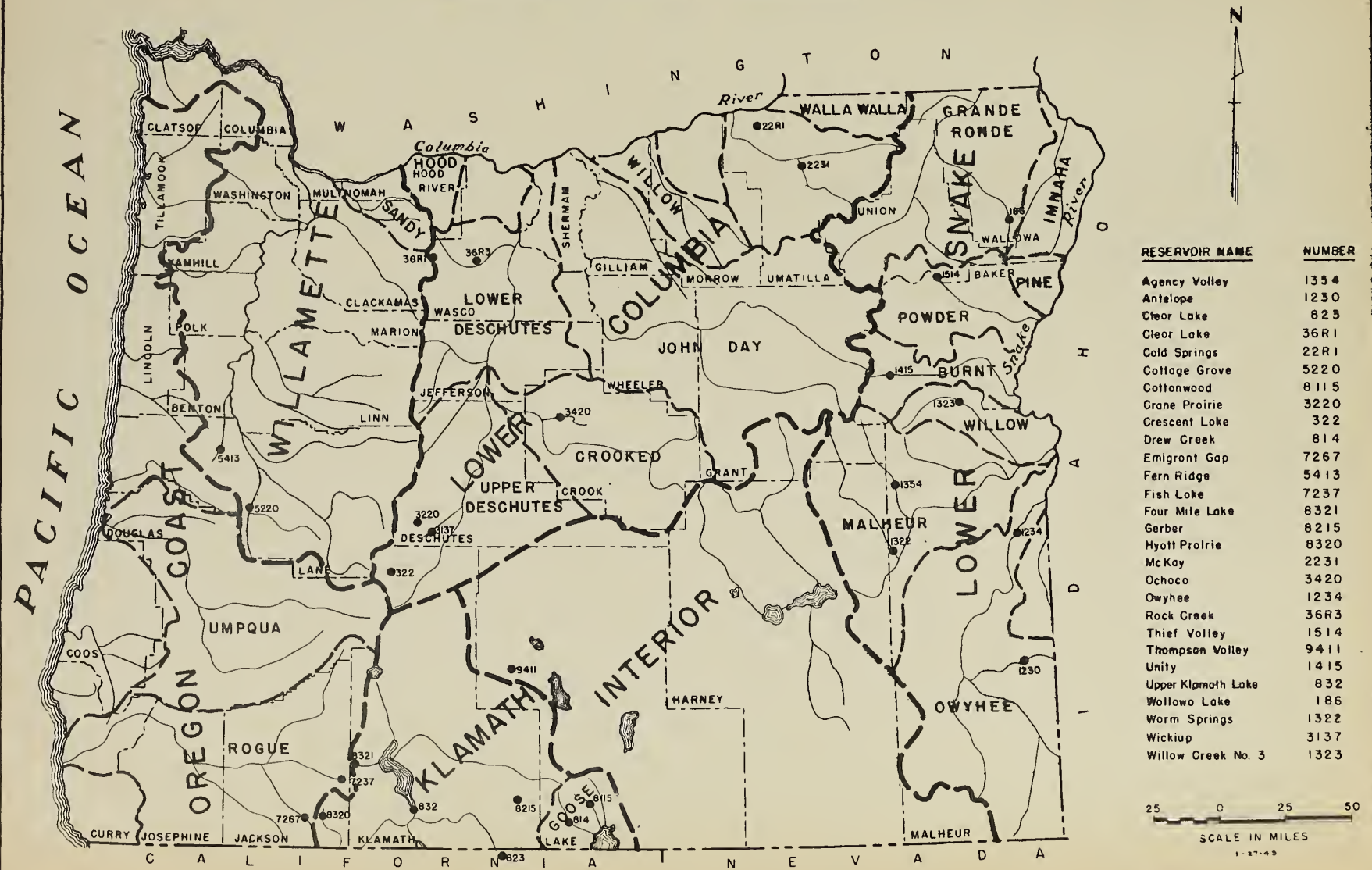
e - 1937-46 avg.

f - 1944-47

g - 1943-47

h - 1942-47

IMPORTANT OREGON RESERVOIRS



RESERVOIR NAME	NUMBER
Agency Volley	1354
Antelope	1230
Cleor Lake	823
Cleor Lake	36R1
Cold Springs	22R1
Cottage Grove	5220
Cottonwood	8115
Crane Prairie	3220
Crescent Lake	322
Drew Creek	814
Emigront Gap	7267
Fern Ridge	5413
Fish Lake	7237
Four Mile Lake	8321
Gerber	8215
Hyott Prairie	8320
McKay	2231
Ochoco	3420
Owyhee	1234
Rock Creek	36R3
Thief Volley	1514
Thompson Volley	9411
Unity	1415
Upper Klamath Lake	832
Wallowa Lake	186
Worm Springs	1322
Wickiup	3137
Willow Creek No. 3	1323

25 0 25 50

SCALE IN MILES

1-27-49

U.S DEPT. OF AGRICULTURE

SOIL CONSERVATION SERVICE

7-L-3060

STATUS OF SNOW COVER AS OF APRIL FIRST
Summary of Snow Survey Data
By Watersheds as of About April First

Stream Basin	Number Of Snow Courses Averaged	Average Water Depth in Snow Cover (Inches) 1949	1948	1947	Avg. past yrs. of record	Yrs. of Record	1949 Snow Water Depth (Inches) as percent of that in 1948	1947	avg.
Owyhee River	14	11.2	7.2				155		
	14	11.2		2.1				533	
	14	11.2			7.3	(7-21)			153
Malheur River	6	10.3	8.2				126		
	6	10.3		3.8				271	
	6	10.3			7.2	(4-19)			143
Burnt River	4	11.9	9.1				131		
	4	11.9		2.6				458	
	4	11.9			8.0	(4-16)			149
Powder River	6	19.2	16.3				118		
	6	19.2		11.2				171	
	6	19.2			14.3	(2-13)			134
Pine Creek	1	39.6	27.1				146		
	1	39.6		20.4				194	
	1	39.6			27.5	(11)			144
Imnaha River	2	34.6	35.6				97		
	2	34.6		33.8				102	
	2	34.6			31.6	(7-15)			109
Grande Ronde River	8	29.8	26.5				112		
	8	29.8		19.5				153	
	8	29.8			21.5	(7-20)			139
Walla Walla River	1	44.5	34.0				131		
	1	44.5		21.4				208	
	1	44.5			26.1	(18)			170
Umatilla River	4	22.4	18.0				124		
	4	22.4		8.0				280	
	4	22.4			12.8	(10-20)			175
Willow Creek	1	16.1	12.5				129		
	1	16.1		3.7				435	
	1	16.1			9.7	(20)			166
John Day River	10	14.8	14.5				102		
	10	14.8		7.6				195	
	10	14.8			11.1	(5-20)			133
Deschutes River	7	46.8	31.9				147		
	5	40.5		14.5				279	
	7	46.8			27.4	(1-20)			171
Crooked River	4	12.6	11.4				110		
	4	12.6		3.8				332	
	4	12.6			8.5	(5-20)			148
Hood River	1	27.7	14.1				196		
	1	27.7		1.6				1731	
	1	27.7			9.1	(16)			304
White River	1	31.2	15.4				202		
	1	31.2		1.4				2228	
	1	31.2			12.2	(17)			256
Sandy River	3	59.3	36.8				161		
	3	59.3		22.0				270	
	3	59.3			29.2	(12-17)			203

Status of Snow Cover (Cont'd.)

Stream Basin	Number of Snow Courses Averaged	Average Water Depth in Snow Cover (Inches) 1949	1948	1947	Avg. past yrs. of record	Yrs. of Record	1949 Snow Water Depth (Inches) as percent of that in 1948	1947	avg.
Clackamas River	1	38.7	19.1				203		
	1	38.7		8.7				445	
	1	38.7			16.0	(12)			242
Willamette River	8	42.8	27.1				158		
	6	43.5		13.3				327	
	8	42.8			19.7	(6-19)			217
Silver Lake Basin	1	0	0				100		
	1	0		0				100	
	1	0			0.8	(8)			0
Chewaucan River	1	11.4	4.9				233		
	1	11.4		1.3				877	
	1	11.4			5.1	(10)			223
Warner Lake	1	14.5	8.8				165		
	1	14.5		2.4				604	
	1	14.5			8.7	(10)			167
Guano Lake	2	10.4	4.0				260		
	2	10.4		0.0				-	
	2	10.4			4.1	(9)			254
Harney Basin	8	11.3	11.4				99		
	8	11.3		5.1				222	
	8	11.3			9.3	(5-18)			122
Umpqua River	6	35.7	28.1				127		
	5	31.5		9.1				346	
	6	35.7			22.3	(1-20)			160
Upper Rogue River	15	34.3	22.3				154		
	14	36.1		15.8				228	
	15	34.3			23.3	(1-18)			147
Applegate River	5	35.1	18.7				188		
	5	35.1		14.9				236	
	5	35.1			21.9	(7-13)			160
Illinois River	2	22.0	9.0				244		
	2	22.0		3.6				611	
	2	22.0			15.0	(12-13)			147
Klamath Lake Basin	22*	20.0	12.8				156		
	22*	20.0		8.2				244	
	22*	20.0			13.7	(5-22)			146
Goose Lake Basin	4*	11.2	6.5				172		
	4*	11.2		1.3				862	
	4*	11.2			5.2	(8-18)			215

* Including Copco water measurement stations.

VALLEY PRECIPITATION[a]

DRAINAGE DIVISIONS	CURRENT YEAR Oct. 1, 1948 - April 1, 1949		LAST YEAR Oct. 1, 1947 - April 1, 1948	
	P	D	P	D
Southeastern	3.91	-1.93	4.98	-0.77
Southcentral	4.79	-1.34	9.92	-0.67
Central	7.40	+0.19	9.79	+2.07
Columbia River	12.28	+1.31	11.12	+2.48
Wallowa Mountains	7.88	-1.21	10.06	+0.18
Blue Mountains	8.66	-0.81	12.48	+1.38
Southern	16.44	-1.48	19.84	+1.78
Willamette Valley	46.41	+5.27	49.03	+8.60

P - Inches Precipitation D - Inches Departure from Normal

Southeastern — Malheur and Owyhee drainages

Southcentral — Interior Basin drainages and Goose Lake.

Central — Deschutes and Crooked drainages

Columbia River — Lower valleys of the Walla Walla, Umatilla, John Day, Deschutes and Hood River drainages.

Wallowa Mountains — Imnaha, Wallowa, Catherine, Eagle and Pine drainages.

Blue Mountains — Upper valleys of the Burnt, Powder, Grande Ronde, Umatilla, Walla Walla, John Day, Silvies and Malheur drainages.

Southern — Umpqua, Rogue and Klamath drainages.

Willamette Valley — All Willamette drainages

Note: Stations used for determining the averages for the current year are not necessarily the same as those used last year.

a - Preliminary data computed from Weather Bureau records.

DRAINAGE BASIN and SNOW COURSE	LOCATION Number or State	Sec.	Twp.	Range	Elev.	Date of Survey	Snow Depth (In.)	SNOW COVER MEASUREMENTS Water Content (In.) 1949	1948	1947	Past Record Years of Record	Av. Water Content (Inches)
UPPER COLUMBIA DRAINAGE												
LOWER SNAKE IN OREGON												
OWYHEE RIVER												
Big Bend	Nev.6	30	45N	56E	6800	3-28	42.4	*15.2	8.3	3.6	21	9.1
Fry Canyon	Nev.7	32	43N	54E	6800	3-29	44.5	*15.0x	7.9	4.4	8	8.5
Gold Ck.Ranger Sta.	Nev.5	32	45N	56E	6600	3-28	28.9	* 9.5x	5.8	0.0	9	5.8
Granite Peak	Nev.4	27	44N	39E	8600	Abt.4-1	31.4	* 8.9	9.7	7.2	9	11.8
Lower Buckskin	Nev.1	25	45N	39E	6800	Abt.4-1	39.5	*14.2y	10.2	0.0	8	7.5
Lower Jack Creek	Nev.9	19	42N	53E	7000	3-31	15.4	* 4.5	4.7	0.0	14	4.3
Martin Creek	Nev.3	24	44N	39E	7000	Abt.4-1	26.3	* 8.5	9.7	1.1	8	8.3
Midas	Nev.6	18	39N	46E	7200	4-1	25.2	* 8.0	1.4	0.0	8	2.0
Rodeo Flat	Nev.8	31	43N	54E	7000	3-29	47.0	*19.0y	9.1	4.2	8	9.3
South Mountain No.2	Idaho	35	7S	5W	6340	3-26	41.8	*16.8	11.8	3.6	9	10.7
Taylor Canyon	Nev.12	32	39N	53E	5200	3-30	29.4	* 8.9x	0.5	0.0	9	3.3
Tremewan Ranch	Nev.11	4	29N	55E	5600	3-30	13.1	* 4.6x	0.0	0.0	7	0.1
Upper Buckskin	Nev.2	14	45N	39E	8200	Abt.4-1	29.6	* 9.1	10.4	1.4	13	11.1
Upper Jack Creek	Nev.10	9	42N	53E	7800	3-31	43.0	*14.3	11.6	4.2	8	10.1
MALHEUR RIVER												
Barney Creek	143	16	14S	36E	5950	3-31	33.2	10.8	8.8	5.2	4	8.1
Blue Mountain Springs	133	21	15S	35E	5900	3-29	56.6	20.1	14.9	10.4	19	14.2
Crane Prairie	137	24	16S	34E	5375	3-29	35.6	13.1x	10.4	2.4	11	7.3
Lake Creek	136	10	16S	33½E	5120	3-30	33.5	11.8	10.0	4.8	11	8.8
Rock Spring	134	23	18S	32E	5100	3-30	18.4	6.2	5.0	0.0	13	4.2
Stinking Water	135	33	21S	34E	4800	4-1	0.0	0.0	T	0.0	11	0.6

* - Telegraphic; subject to minor revision y - Greatest of record any month
x - Greatest of record for April 1

OREGON SNOW SURVEYS, APRIL, 1949

DRAINAGE BASIN and SNOW COURSE	LOCATION					SNOW COVER MEASUREMENTS						
								Water Content (In.)			Past Record	
	Number or State	Sec.	Twp.	Range	Elev.	Date of Survey	Snow Depth (In.)	1949	1948	1947	Years of Record	Av. Water Content (Inches)
BURNT RIVER												
Barney Creek	143	16	14S	36E	5950	3-31	33.2	10.8	8.8	5.2	4	8.1
Blue Mountain Summit	141	6	12S	36E	5098	3-29	29.4	10.8	9.2	2.4	14	6.6
Dooley Mountain	156	32	11S	40E	5430	3-30	33.3	12.0x	9.5	1.9	10	8.0
Tipton	142	34	10S	35½E	5100	3-30	38.0	14.1	9.0a	1.0	16	9.3
POWDER RIVER												
Anthony Lake	155	18	7S	37E	7125	3-29	88.0	33.6a	31.4	30.6	13	26.6
Bourne	154	33	8S	37E	5800	3-29	51.0	17.1	15.4	9.6	13	14.8
Dooley Mountain	156	32	11S	40E	5430	3-30	33.3	12.0x	9.5	1.9	10	8.0
Eilertson Meadows	151B	18	8S	38E	5400	3-30	40.8	15.2	9.2	6.8	11	10.6
Gold Center	249	21	9S	36E	5340	3-30	37.7	12.6	13.5	6.9	10	10.5
Goodrich Lake	157	34&35	8S	38E	6775	No Report			34.7	31.3	2	33.0
Summit Springs	184	9	6S	37E	6000	No Report			24.2	21.8	13	21.1
Taylor Green	185	3	6S	42E	5740	3-29	62.4	24.7y	18.9	11.6	11	15.3
PINE CREEK												
Schneider Meadows	161	35	6S	45E	5400	Abt.3-29	87.2	39.6	27.1	20.4	11	27.5
IMNAHA RIVER												
Aneroid Lake No. 1	183	16	4S	45E	7480	3-27	103.4	39.2	38.4	38.2	15	34.7
Aneroid Lake No. 2	183A	16	4S	45E	7000	3-27	83.1	29.9	32.8	29.4	7	28.4
Coverdale	171	22	5S	47E	4250	No Report			12.1	0.0	4	9.6

a - Partly Estimated
x - Greatest of record for April 1
y - Greatest recorded any month

DRAINAGE BASIN and SNOW COURSE	LOCATION Number or State	Sec.	Twp.	Range	Elev.	SNOW COVER MEASUREMENTS Date of Survey	Snow Depth (In.)	Water Content (In.) 1949	1948	1947	Past Record Years of Record	Av. Water Content (Inches)
GRANDE RONDE RIVER												
Aneroid Lake No. 1	183	16	4S	45E	7480	3-27	103.4	39.2	38.4	38.2	15	34.7
Aneroid Lake No. 2	183A	16	4S	45E	7000	3-27	83.1	29.9	32.8	29.4	7	28.4
Anthony Lake	155	18	7S	37E	7125	3-29	88.0	33.6a	31.4	30.6	13	26.6
Beaver Reservoir	188	8	5S	37E	5340	No Report			14.8	8.2	10	10.8
Camp Carson	187	33	6S	36E	5970	3-30	46.4	17.2	13.6	5.8	10	9.0
Meacham	221	24&25	1S	35E	4300	3-29	36.9	15.8x	12.9	0.5	20	8.0
Moss Spring	186A	28	3S	41E	5850	3-30	79.9	33.8	29.7	18.5	11	24.0
Summit Springs	184	9	6S	37E	6000	No Report			24.2	21.8	13	21.1
Taylor Green	185	3	6S	42E	5740	3-29	62.3	24.7y	18.9	11.6	11	15.3
Tollgate	212	32	4N	38E	5070	3-29	98.7	44.5x	34.0	21.4	18	26.1
LOWER COLUMBIA DRAINAGE												
WALLA WALLA RIVER												
Tollgate	212	32	4N	38E	5070	3-29	98.7	44.5x	34.0	21.4	18	26.1
UMATILLA RIVER												
Emigrant Springs	222	29	1N	35E	3925	3-29	27.3	12.1	9.9	0.0	20	5.4
Lucky Strike	223	28	3S	32E	5050	3-28	50.0	17.3x	15.3	10.0	10	11.8
Meacham	221	24&25	1S	35E	4300	3-29	36.9	15.0x	12.9	0.5	20	8.0
Tollgate	212	32	4N	38E	5070	3-29	98.7	44.5x	34.0	21.4	18	26.1
WILLOW CREEK												
Arbuckle Mountain	241	33	4S	29E	5400	3-28	33.2	16.1	12.5	3.7	20	9.7

a - Partly estimated
x - Greatest of record for April 1
y - As great or greatest recorded any month

DRAINAGE BASIN and SNOW COURSE	LOCATION Number or State	Sec.	Twp.	Range	Elev.	Date of Survey	Snow Depth (In.)	Water Content (In.) 1949	1948	1947	Past Record Years of Record	Av. Water Content (Inches)
JOHN DAY RIVER												
Arbuckle Mountain	241	33	4S	29E	5400	3-28	33.2	16.1	12.5	3.7	20	9.7
Beech Creek Summit	246A	4	12S	30E	4800	3-29	15.4	5.1	6.0	0.0	12	4.6
Blue Mountain Springs	133	21	15S	35E	5900	3-29	56.6	20.1	14.9	10.4	19	14.2
Blue Mountain Summit	141	6	12S	36E	5098	3-29	29.4	10.8	9.2	2.4	14	6.6
Dixie Springs	244	28	11S	34E	6650	3-29	74.1	26.8	24.1	21.4	13	22.7
Gold Center	249	21	9S	36E	5340	3-29	37.5	12.6	13.5	6.9	10	10.5
Izee Summit	964	28	16S	29E	5293	3-28	28.9	8.1	10.1	1.6	13	6.8
Olive Lake	245	14	9S	33½E	6000	3-31	66.7	26.5	30.0	19.7	13	18.4
Snow Mountain	965	1	19S	26E	6300	4-5	38.0	*15.0	19.0	9.7	5	13.4
Starr Ridge	247B	20	15S	31E	5150	3-28	22.9	7.1	5.9	0.3	13	3.8
CROOKED RIVER												
Dorr	343	14	13S	23E	5670	3-29	41.3	14.7y	12.4	5.3	12	9.6
Marks Creek	344	25	12S	19E	4540	3-28	15.2	4.8	2.8	0.0	11	2.5
Ochoco Meadows	341	21	13S	20E	5200	4-1	41.1	15.8	11.5	0.0	20	8.5
Snow Mountain	965	1	19S	26E	6300	4-5	38.0	*15.0	19.0	9.7	5	13.4
DESCHUTES RIVER												
Cascade Summit	321	7	23S	6E	4880	3-28	108.2	44.9y	34.2	21.0	19	28.1
Clear Lake	361	29	4S	9E	3500	3-28	70.1	31.2x	15.4	1.4	17	12.2
Crescent Lake	325	11	24S	6E	4760	3-28	42.0	18.0	12.0	0.0	14	6.9
Hogg Pass	351	24	13S	7½E	4755	3-30	161.5	73.4y	45.8	35.8	11	37.2
New Dutchman Flat	324A	21	18S	9E	6400	3-31	157.4	69.1	52.2	-	12	45.7
Three Creeks Meadows	331	3	17S	9E	5600	4-1	84.1	34.8y	19.9	14.5	20	18.4
Windigo Pass	744	20	25S	6E	5800	3-29	138.0	56.6x	43.6	-	1	43.6
Willamette Pass	323	21	24S	5½E	5600	3-30	137.2	52.7	-	-	5	33.5
Trout Creek	332	20	15S	9E	4500	4-1	42.2	17.0	New Snow Course			

* - Telegraphic; subject to minor revision
x - Greatest of record for April 1 y - Greatest of record any month

OREGON SNOW SURVEYS, APRIL, 1949

DRAINAGE BASIN and SNOW COURSE	LOCATION Number or State	Sec.	Twp.	Range	Elev.	SNOW COVER MEASUREMENTS Date of Survey	Snow Depth (In.)	Water Content (In.) 1949	1948	1947	Past Record Years of Record	Av. Water Content (Inches)
HOOD RIVER												
Brooks Meadows	431	2	2S	10E	4300	3-30	64.9	27.7y	14.1	1.6	16	9.1
SANDY RIVER												
Clear Lake	361	29	4S	9E	3500	3-28	70.1	31.2x	15.4	1.4	17	12.2
Phlox Point-Mt.Hood	452	6	3S	9E	5600	Abt.3-28	195.0	100.6ay	68.7	54.2	12	56.3
Still Creek	451	25	3S	8½E	3700	Abt.3-28	101.0	46.1	26.3	10.5	12	19.1
CLACKAMAS RIVER												
Clackamas Lake	592	35	5S	8½E	3400	No Report			13.0	-	8	11.4
Peavine Ridge	591	14& 15	6S	7E	3500	3-31	86.2	38.7y	19.1	8.7	12	16.0
WILLAMETTE RIVER												
Breitenbush	551	21	9S	7E	2325	3-29	35.3	13.6x	4.6	-	6	1.4
Cascade Summit	321	7	23S	6E	4880	3-28	108.2	44.9y	34.2	21.0	19	28.1
Champion	522	12	23S	1E	4500	4-1	112.7	42.8	36.6	10.1	10	22.3
Hogg Pass	351	24	13S	7½E	4755	3-30	161.5	73.4y	45.8	35.8	11	37.2
McKenzie	531	35	15S	7½E	4800	4-3	160.3	67.9y	46.6	-	9	35.0
Marion Forks	553	28	11S	7E	2730	3-29	61.4	28.7x	10.4	3.4	8	7.3
Mary's Peak	541	21	12S	7W	3620	3-28	64.0	27.8y	13.2	0.4	10	8.6
Santiam Junction	552	14	13S	7E	3990	3-29	93.3	43.2x	25.4	8.9	8	17.9
Willamette Pass	323	21	24S	5½E	5600	3-30	137.2	52.7	-	-	5	33.5
INTERIOR DRAINAGE												
SILVER LAKE												
Silver Creek	942	25&26	29S	13E	4900	3-31	0.0	0.0	0.0	0.0	8	0.8

a - Partly estimated x -Greatest of record for April 1 y - Greatest of record any month

OREGON SNOW SURVEYS, APRIL, 1949

DRAINAGE BASIN and SNOW COURSE	LOCATION					SNOW COVER MEASUREMENTS						
								Water Content (In.)			Past Record	
	Number or State	Sec.	Twp.	Range	Elev.	Date of Survey	Snow Depth (In.)	1949	1948	1947	Years of Record	Av. Water Content (Inches)
CHEWAUCAN RIVER												
Mill Creek	922	1	34S	17E	6200	3-31	36.8	11.4y	4.9	1.3	10	5.1
HARNEY BASIN												
Deer Creek	973	17	36S	26E	6670	4-1	32.1	9.8	5.8	0.0	9	6.6
Fish Creek	952	4	33S	33E	7900	3-30	72.3	24.2	25.1	20.6	9	23.5
Idylwild Camp	961A	33	20S	31E	5200	3-30	18.6	6.0	4.8	0.0	18	3.0
Izee Summit	964	28	16S	29E	5293	3-28	28.9	8.1	10.1	1.6	13	6.8
Rock Spring	134	23	18S	32E	5100	3-30	18.4	6.2	5.0	0.0	13	4.2
Silvies	951	35	32S	33E	6900	3-29	42.0	14.2	15.3	8.6	11	13.3
Snow Mountain	965	1	19S	26E	6300	4-5	38.0	*15.0	19.0	9.7	5	13.4
Starr Ridge	247B	20	15S	31E	5150	3-28	22.9	7.1	5.9	0.3	13	3.8
GUANO LAKE												
Bald Mountain	Nev.	17	45N	21E	6720	3-31	27.4	9.1y	2.2	0.0	9	2.3
Guano Creek	972	13	36S	25E	6480	4-1	35.4	11.7	5.9	0.0	9	6.0
WARNER LAKE												
Camas Creek	911A	5	39S	21E	5720	3-28	40.6	14.5x	8.8	2.4	10	8.7
WEST COAST DRAINAGE												
UMPQUA RIVER												
Champion	522	12	23S	1E	4500	4-1	112.7	42.8	36.6	10.1	10	22.3
Diamond Lake	743	29	27S	6E	5315	3-30	77.0	30.9	25.6	12.7	20	17.4
N.Umpqua Nr.Lake Ck.	742	19	26S	6E	4215	3-26	61.3	24.2y	14.8	2.4	12	9.2

* - Telegraphic; subject to minor revision

a - Partly estimated x - Greatest of record for April 1 y - Greatest of record any month

OREGON SNOW SURVEYS, APRIL, 1949

DRAINAGE BASIN and SNOW COURSE	LOCATION					SNOW COVER MEASUREMENTS						
								Water Content (In.)			Past Record	
	Number or State	Sec.	Twp.	Range	Elev.	Date of Survey	Snow Depth (In.)	1949	1948	1947	Years of Record	Av. Water Content (Inches)
UMPQUA RIVER (Cont'd.)												
Trap Creek	741	1	27S	4E	3800	3-17	27.0	10.5	13.1	0.0	12	10.1
Whaleback	7217	3	31S	2E	5140	4-1	111.3	49.0y	35.0a	20.3	11	31.4
Windigo Pass	944	20	25S	6E	5800	3-29	138.0	56.6x	43.6	-	1	43.6
ROGUE RIVER												
Althouse	7216	17	41S	7W	4400	4-1	20.3	7.2	3.5	0.0	12	6.4
Annie Spring	831	19	31S	6E	6018	4-1	140.6	58.2	46.9	34.4	16	42.3
Big Red Mountain	729	31	40S	1W	6500	3-29	99.1	36.7	20.5	19.3	13	27.7
Billie Creek Divide	722	30	36S	5E	5300	4-3	78.6	34.6	29.0	11.1	18	22.5
Fish Lake	725	3	37S	4E	4865	4-2	50.2	23.3x	13.8	0.5	15	12.0
Grayback Peak	727	9	40S	5W	6000	4-1	84.5	36.9	14.6	7.1	13	23.6
Hobart Lake	7221	17	40S	3E	5010	4-1	22.2	8.9x	5.3	-	1	5.3
Hyatt Prairie Res.	723	15	39S	3E	4900	3-31	41.5	15.8	12.3	0.0	16	8.0
Little Red Mtn.	7210	25	40S	2W	6500	3-29	82.7	30.6	17.9	17.2	13	21.6
Park Headquarters	838	8	31S	6E	6450	4-1	161.3	70.9	49.8	42.4	5	56.7
Scragg Mtn. (Calif.)	7220	9	47N	10W	6200	3-29	96.3	47.9y	21.7	17.4	7	20.2
Seven Lakes #1	7211	3	34S	5E	6800	3-31	182.1	77.6	37.2	33.1	13	52.7
Seven Lakes #2	7212	26	33S	5E	6200	3-31	150.3	60.3y	33.1	29.0	13	40.1
Silver Burn	7219	30	30S	4E	3720	4-1	36.5	16.2	11.2	0.0	12	8.5
Siskiyou Summit	728	17	40S	2E	4630	4-3	12.7	5.8	4.4	1.1	13	3.3
South Fork Canal	7218	12	33S	3E	5500	4-1	10.0	3.8	0.0	0.0	12	0.6
Wagner Butte	7213	1	40S	1W	6900	3-29	66.0	23.2y	18.8	13.4	14	16.3
Whaleback	7217	3	31S	2E	5140	4-1	111.3	49.Cy	35.0a	20.3	11	31.4
KLAMATH LAKE BASIN												
Annie Spring	831	19	31S	6E	6018	4-1	140.6	58.2	46.9	34.4	16	42.3
Beatty 2/		22	36S	12E	4300	3-31	0.0	0.0	0.0	0.0	22	0.0

2/ Water content determined by melting a measured sample (The California Oregon Power Company's Station).

a - Partly estimated x - Greatest of record for April 1 y - Greatest of record any month

DRAINAGE BASIN and SNOW COURSE	LOCATION					SNOW COVER MEASUREMENTS						
								Water Content (In.)			Past Record	
	Number or State	Sec.	Twp.	Range	Elev.	Date of Survey	Snow Depth (In.)	1949	1948	1947	Years of Record	Av. Water Content (Inches)
KLAMATH LAKE BASIN (Cont'd.)												
Billie Creek Divide	722	30	36S	5E	5300	4-3	78.6	34.6	29.0	11.1	18	22.5
Bly 101 Ranch 2/		22	35S	14E	4800	3-31	0.0	0.0	0.0	0.0	21	0.0
Chemult No. 1	834	21	27S	8E	4760	4-1	31.0	12.8	7.3	0.0	12	6.9
Chiloquin 2/		34	34S	7E	4187	4-1	0.0	0.3	0.0	0.0	21	0.1
Crowder Flat (Calif.)		30	47N	11E	5200	3-29	2.9	0.7	0.5a	0.0	9	0.0
Crystal 2/		26	34S	6E	4200	3-31	21.0	9.5	4.5	0.0	19	4.5
Gerber	836	12	39S	13E	4850	4-1	0.0	0.0	New snow course			
Fort Klamath 2/		22	33S	7½E	4150	3-31	6.0	2.5	0.0	0.0	22	0.9
Harriman Lodge 2/		3	36S	6E	4200	4-1	0.0	0.0	0.0	0.0	21	0.7
Hyatt Prairie Res.	723	15	39S	3E	4900	3-31	41.5	15.8	12.3	0.0	16	8.0
Kirk 2/		1	33S	7E	4533	No Report			0.0	0.0	19	1.6
Lake of the Woods No.1	835	11	37S	5E	4960	3-31	44.9	16.7	8.0	1.7	12	8.4
Park Headquarters	838	8	31S	6E	6450	4-1	161.3	70.9	49.8	42.4	5	56.7
Quartz Mountain	811	2	38S	16E	5320	4-1	24.9	9.4	4.3	0.0	18	3.8
Quartz Mountain 2/		33	37S	16E	5504	3-31	20.5	7.5	4.5	T	18	4.4
Seven Lakes No. 1	7211	3	34S	5E	6800	3-31	182.1	77.6	37.2	33.1	13	52.7
Seven Lakes No. 2	7212	26	33S	5E	6200	3-31	150.3	60.3y	33.1	29.0	13	40.1
Strawberry	837	4	40S	16E	5600	4-3	32.9	*13.2y	8.3	2.8	8	4.0
Summer Rim	841	15	33S	16E	7200	3-30	52.5	14.9	14.8	10.1	12	15.8
Sun Mountain	836	22	32S	7½E	5350	3-30	86.2	31.9	18.3	15.4	12	25.6
Taylor Butte	842	16	33S	11E	5100	3-31	14.5	5.0	2.0	0.0	12	3.0
Yamsey 2/		20	31S	11E	4600	3-31	3.0	1.1	0.0	0.0	18	0.5
GOOSE LAKE BASIN												
Camas Creek	911A	5	39S	21E	5720	3-28	40.6	14.5	8.8	2.4	10	8.7
Quartz Mountain	811	2	38S	16E	5320	4-1	24.9	9.4	4.3	0.0	18	3.8
Quartz Mountain 2/		33	37S	16E	5504	3-31	20.5	7.5	4.5	T	18	4.4
Strawberry	837	4	40S	16E	5600	4-3	32.9	*13.2y	8.3	2.8	8	4.0

2/ Water content determined by melting a measured sample (The California Oregon Power Company's station.)

a - Partly estimated

* - Telegraphic; subject to minor revision

x - Greatest of record for April 1

y - Greatest of record any month

SPECIAL MID-MARCH SNOW SURVEYS AND SNOW SURVEY DATA NOT PUBLISHED IN MARCH 1 REPORT

DRAINAGE BASIN and SNOW COURSE	LOCATION					Date of Survey	Snow Depth (In.)	SNOW COVER MEASUREMENTS Water Content (In.)			Past Record	
	Number or State	Sec.	Twp.	Range	Elev.			1949	1948	1947	Years of Record	Av. Water Content (Inches)
OWYHEE RIVER												
Disaster Peak	Nev.6	8	47N	34E	6500	3-7	41.1	12.7	New Snow Course			
Midas	Nev.	18	39N	46E	7200	3-1	34.0	9.2*	0.0	T	9	5.0
So. Mtn. #2	Idaho	35	7S	5W	6340	Abt.3-1	46.0	16.0*	7.8	5.4	9	10.7
Tremewan Ranch	Nev.11	4	29N	55E	5600	2-28	22.8	6.0*	6.0	0.0	17	2.6
POWDER RIVER												
Anthony Lake	155	18	7S	37E	7125	3-17	96.8	33.6	Special Mid-March Survey			
GRANDE RONDE RIVER												
Anthony Lake	155	18	7S	37E	7125	3-17	96.8	33.6	"	"	"	
Meacham	221	24&25	1S	35E	4300	3-17	40.5	17.7	"	"	"	
Tollgate	212	32	4N	38E	5070	3-17	102.6	43.4	"	"	"	
WALLA WALLA RIVER												
Tollgate	212	32	4N	38E	5070	3-17	102.6	43.4	"	"	"	
UMATILLA RIVER												
Emigrant Springs	222	29	1N	35E	3925	3-17	34.9	15.2	"	"	"	
Meacham	221	24&25	1S	35E	4300	3-17	40.5	17.7	"	"	"	
Tollgate	212	32	4N	38E	5070	3-17	102.6	43.4	"	"	"	

* Telegraphic - Subject to minor revision

SPECIAL MID-MARCH SNOW SURVEYS AND SNOW SURVEY DATA NOT PUBLISHED IN MARCH 1 REPORT

DRAINAGE BASIN and SNOW COURSE	LOCATION					Date of Survey	Snow Depth (In.)	SNOW COVER MEASUREMENTS Water Content (In.)			Past Record	
	Number or State	Sec.	Twp.	Range	Elev.			1949	1948	1947	Years of Record	Av. Water Content (Inches)
HOOD RIVER												
Greenpoint Res.*	433	28	2N	9E	3400	3-3	86.6	34.2	10.5	-	1	10.5
UMPQUA RIVER												
Trap Creek	741	1	27S	4E	3800	3-17	27.0	10.5	No Previous Mid-March Survey			
ROGUE RIVER												
Seven Lakes #1	7211	3	34S	5E	6800	3-11	169.4	76.0	-	26.0	3	39.3
Seven Lakes #2	7212	26	33S	5E	6200	3-11	145.4	54.6	-	23.2	3	35.1
DESCHUTES RIVER												
Caldwell Ranch	326	30	21S	8E	4400	3-17	39.0	15.7	No Previous Mid-March Survey			
Irish-Taylor Lake	329	25	20S	6E	5500	3-16	139.8	61.4	New Snow Course			
WILLAMETTE RIVER												
Waldo Lake	521A	15	21S	6E	5500	3-15	111.4	47.5	No Previous Mid-March Survey			

* Telegraphic - Subject to minor revision

IRRIGATION WATER SUPPLY FORECASTS

SEASON OF 1949

- Foreward -

Measurements of snow depth and water content were secured on all Oregon snow courses near April 1. Watershed soil moisture determinations, usually made at 12 scattered stations during mid-March, were not obtained this year due to lack of personnel.

Local Water Forecast Committee meetings were held this year in eight important irrigated regions of the State during the period March 29 to April 6 as follows: The Dalles for Northcentral Oregon: Pendleton for the Umatilla-Walla Walla Basin; La Grande for Northeastern Oregon; Ontario for Southeastern Oregon; Burns for Harney and John Day Basins; Redmond for Central Oregon; Lakeview for Southcentral Oregon; and Grants Pass for Southern Oregon. Nearly all of the thirty-seven cooperating agencies were represented at these discussions.

Each committee's report, outlining the irrigation water prospect for 1949 in its respective area, is summarized herewith. Modifications of these forecasts may later be required in accordance with deviations of precipitation and temperature from normal during the runoff season.

Forecasts

Northcentral Oregon

Abundant water supplies appear to be guaranteed for 1949 in the northcentral portion of Oregon including Hood, Wasco and Sherman counties. Water regulation which usually cuts off late water right holders is not expected to be necessary this year.

Hood River Valley lands will have ample water supplies this year with West Fork of Hood River forecast to discharge 225,000 acre feet during April-September. This flow will be only slightly less than the previous record flow of 227,800 acre feet measured in 1933 and will be 76 percent above average. During the four months April-July the flow will be 200,000 acre feet. Should temperatures and precipitation during April and May be above normal this stream could easily establish a new record discharge.

There are no gaging stations on Middle Fork or East Fork of Hood River but from a relationship to the flow of West Fork it appears that Middle Fork will discharge about 45,000 and East Fork about 68,000 acre feet during April-September. April-July discharge for these latter two stations will probably be about 40,000 and 60,000 acre feet respectively.

Flow of main Hood River at Powerdale plus flow of the Power Canal will probably reach a new record of 450,000 acre feet for April-September. This is slightly more than 449,210 recorded in 1943. April-July flow for this station will probably be 400,000 acre feet. Lands on the west side of Hood River Valley served from Greenpoint watershed have good water supplies this year since water contained in snow at Greenpoint Reservoir is now about three times what it was last year at this time.

Orchard soils in vicinity of The Dalles are reported wetted down to a satisfactory depth. Other crop lands in Wasco County are wetted down deeper than usual.

Well sustained runoff from the abnormal snow pack is expected to make unnecessary regulation of water this year on Fifteenmile Creek and other Northern Wasco streams.

White River at Tygh Valley is forecast to discharge 280,000 acre feet for the six months April-September. This flow will be 128 percent above average and will set a new record well above 241,000 acre feet recorded in 1943.

Badger, Rock and Gate Creeks and other small tributaries of White River should have an unusually well sustained runoff this year from the above average snow cover. Rock Creek reservoir with capacity of 1,400 acre feet and Badger reservoir, capacity 600 acre feet, will both easily fill this year, assuring an excellent late season supply to lands served from them.

Umatilla-Walla Walla Basin

Water supplies for irrigated lands in Umatilla and Walla Walla basins for 1949 will be ample to abundant. The deep snow pack has established new high records on three of the five snow courses in this area. Discharge of major streams will be 40 to 55 percent above average. A new record flow will probably be realized by the South Fork of Walla Walla near Milton.

Crop land soil moisture appears to be deficient in the lower valley areas where the ground was deeply frozen before snow fell on it. However, there probably is sufficient moisture to produce an average grain crop. In the upper valley areas moderately heavy snow prevented deep frost penetration and permitted penetration of moisture as soon as early melt began. These soils are well wetted to saturated. The extreme winter temperatures winter-killed much fall-sown wheat and it is estimated that about 50,000 acres are being re-seeded with the farmers experiencing great difficulty in working the soil due to the lateness of the spring weather.

South Fork of Walla Walla River near Milton will discharge 93,000 acre feet during April-September to establish a new flow record. The previous high occurred in 1933 when 84,450 acre feet were measured. April-July discharge this year will probably be 79,000 acre feet. There is a small possibility that late season water deficiencies may occur for a few lands with recent rights served from Hudson Bay and Pleasant View Canals but only if unfavorable melt conditions develop which would reduce the sustained flow of this stream.

Flow of Umatilla River near Gibbon is expected to be 112,000 acre feet for the six months beginning April 1. This was exceeded in 1943 with 116,830 acre feet and in 1933 with 132,200 acre feet, but this year will be 48 percent above average.

The Umatilla at Pendleton is forecast to discharge 225,000 acre feet or 55 percent above average for April-September. Previous high flows at this station were 1943 with 232,960; 1933 with 259,500 and 1932 with 229,770 acre feet. April-July discharge will probably be 220,000 acre feet.

Cold Springs Reservoir now stores 45,000 acre feet and can easily be filled to its capacity of 50,000 acre feet.

McKay Creek will probably discharge 35,000 acre feet of water into the reservoir during April-September equalling the 1945 flow but less than the record flow of 42,894 acre feet in 1933. This flow will be 40 percent above normal. The four month discharge April-July will account for 34,000 acre feet.

McKay Reservoir now contains 60,000 acre feet and is by-passing present inflow for a later filling which will easily be accomplished. More than enough water for all irrigation needs is foresoen for lands served from the main Umatilla and McKay Creek.

Birch and Butter Creeks in Umatilla County have the heaviest snow pack of record since 1937. The snow now contains 28 percent more water than it did last year at this time. Water supplies should be better than those experienced in 1948

Willow Creek in Morrow County and Rock Creek in Gilliam County will also have better water supplies than last year for the snow now contains 25 percent more water than on April 1 in 1948.

Northeastern Oregon

The 1949 water supplies in the Northeastern portion of Oregon will vary from good to abundant with most generous supplies to be available in the Grande Ronde valley of Union County. Irrigated lands of Wallowa and Baker counties will receive good water supplies but streamflow in these counties will range above average only from 4 to 20 percent.

Imnaha River at Imnaha is forecast to flow 330,000 acre feet during April-September as compared with 320,500 acre feet in 1946 and average of 286,600 acre feet for the ten years 1938-47. This will provide ample water for irrigation in this area.

Wallowa River, East Fork, is forecast to discharge 11,500 acre feet April-September as compared with average of 11,100 acre feet. The flow in 1946 was 13,300 acre feet. Of the above amount, 9,000 acre feet will flow in April-July and the balance will come in August and September. Present snow pack on this watershed is more than sufficient to supply the needs of water users served from Wallowa reservoir this year.

Hurricane Creek is expected to provide 45,000 acre feet April through September or about 105 percent of average. The flow last year for the same period was 59,400 acre feet but only abnormal precipitation or melting conditions could raise the 1949 total to this figure.

Plentiful water supplies will be provided by Lostine River this year. The April-September flow is expected to equal 130,000 acre feet as compared with average of 117,500. Last year's discharge was 153,500 acre feet for the same period.

Bear Creek is forecast to discharge 70,000 acre feet as compared with 97,400 last year and an average of 65,800 for the April-September period.

Grande Ronde River at La Grande discharged 366,200 acre feet April through Setpember last year and is forecast to flow 260,000 this year as compared with an average of 151,100 acre feet. This flow will be 172 percent of average and will provide a plentiful water supply for 1949.

Catherine Creek will also produce a generous supply with the forecast set at 90,000 acre feet for the April-September period. The flow last year was 109.900 and the average discharge is 66,300 acre feet for above six months.

Baker valley lands can expect satisfactory water supplies with Powder River at Salisbury expected to discharge 70,000 acre feet from April 1 to September 30. This flow will equal 121 percent of average but less than 78,600 acre feet measured last year. April-July flow of this stream will be approximately 66,000 acre feet.

North Powder River, Eagle Creek and Pine Creek have an excellent water outlook with more snow on the watersheds than last year at this time.

Burnt River should provide adequate supplies of water with that stream forecast to flow 39,000 acre feet or 110 percent of average for April-September. Last years flow was 62,700 acre feet for the six months.

Unity Reservoir on Burnt River near Unity now stores 10,800 acre feet and can be easily filled, thus providing excellent water supplies for the lands served therefrom.

Crop and soil moisutre conditions throughout Northcentral Oregon are generally good. Soils under the snow pack are not frozen and are moist to wet, a conditions favoring sustained stream flow.

Southeastern Oregon

Irrigated lands of Malheur County can expect satisfactory water supplies during 1949 due to mountain snow greater than last year and about half again as heavy as the average. However, valley soils are drier than usual and this, together with deficient precipitation, is creating a much earlier demand than usual for irrigation water.

Snow now present on the Malheur watershed is about 25 percent greater than last year and 50 percent above average. Discharge of Malheur River will be only slightly above average for the six months irrigation season beginning April 1.

Malheur River, North Fork, at Beulah is expected to discharge 65,000 acre feet in the next six months as compared with 64,000 last year and average of 59,800 acre feet. Agency Valley reservoir which holds 60,000 acre feet already contains 55,000 and will easily fill.

Malheur River, Middle Fork, near Drewsey is forecast to flow 75,000 acre feet April through September, equal to average flow of 75,300 acre feet. Last year's flow was 74,000 acre feet for this period.

Warmsprings reservoir now stores 66,000 acre feet as against a capacity of 191,000. With a flow of 74,000 acre feet yet to come, as forecast above, there will be sufficient water for the lands served therefrom even though the huge reservoir will not fill.

Bully Creek and Willow Creek with good watershed snow cover at this time should provide as "good" a supply of water this year as last year.

Willow Creek reservoir now stores 7,000 acre feet as compared with 8,200 last year and with a capacity of 26,000 acre feet.

Project lands served from Owyhee reservoir can expect unrestricted water supplies this year. The reservoir now stores 356,700 acre feet. Runoff yet to come will total 600,000 acre feet during the balance of the water year. Last year's flow into the reservoir was 257,300 acre feet although the average is 421,200 acre feet. Snow cover on the Owyhee watershed is about 57 percent greater than last year and 73 percent greater than average. Precipitation from October 1 to date, however, has been greatly subnormal and watershed soils will have to absorb much of the early snowmelt to prime them for following runoff. It is comforting to note that Owyhee lands can expect sufficient water in spite of the fact that the reservoir has never held such a small amount of water on April 1.

Jordan Valley lands can expect adequate water supplies this year with 12,000 acre feet in storage in Arock and still more to come from a snow pack that is half again as heavy as average. Reports are that the troublesome leaks in the Antelope reservoir have ceased to waste water and the outlook for all users is very good.

John Day and Harney Lake Basins

Water content of the snow on the John Day watershed is slightly greater than at this date last year but is 140 percent of average. Soil moisture conditions are better than average in many places and favorable throughout. Streamflow will provide good water supplies to all irrigated lands in the area.

John Day River, North Fork, near Dale is forecasted to discharge 300,000 acre feet during April-September. This flow will equal 138 percent of average and be greater than 267,800 acre feet measured in 1946.

John Day River, Middle Fork, at Ritter should discharge 140,000 acre feet, as compared with 106,400 average for the six month's period. Flow will equal that of 1946.

John Day River at Prairie City plus Power Canal will discharge 50,000 acre feet April-September as compared with average of 46,600 acre feet and 62,200 acre feet measured in 1946.

Strawberry Creek near Prairie City is forecast to discharge 8,200 acre feet or 102 percent average, and discharge in 1946 was 9900 acre feet.

Snow cover on Silvies River and Silver Creek watersheds is about 60 percent above average and 10 percent greater than last year.

Flow of Silvies River near Burns is forecasted at 90,000 acre feet for April-September. This will be materially less than 133,100 acre feet measured last year when additional late season snow and abnormally heavy spring rains resulted in record runoff.

Silver Creek, immediately west of Silvies River, is not gaged throughout the runoff season but discharge there is expected this year to be relatively as good as on Silvies River.

Flow of Donner and Blitzen River is expected to be 60,000 acre feet from a snow pack which is 94 percent of last year and 5 percent above average. This flow will be only slightly less than average of 62,800 acre feet.

Flow of Trout Creek in the Trout Creek Mountains of extreme southern Oregon is forecasted to be 7,000 acre feet or about 76 percent average. A new snow course has been established in this range of mountains at elevation 6500 feet near Disaster Peak. The first measurement is published in this report.

Streamflow in Catlow Valley is expected to be better sustained than usual.

Range conditions in Harney County are backward due to cool weather but soil moisture is favorable to good growth with rising temperatures.

Central Oregon (Deschutes Basin)

Snow on watersheds of Upper Deschutes and Crooked Rivers is far above normal this year. On many snow courses new records were set. Ample water supplies are expected throughout the area.

With snow cover on its headwaters about 75 percent above average and 40 percent greater than last year, Crooked River near Post is forecasted to discharge 190,000 acre feet during April-September. This flow will be 86 percent above average for 1938-47 and will set a new discharge record. Previous high flow was recorded in 1943 with 185,000 acre feet measured.

Net Inflow into Ochoco Reservoir for April-September is forecasted to be 30,000 acre feet or 51 percent above average. Last year's inflow established a new record of 72,300 acre feet. The reservoir now holds 32,130 acre feet and the management is planning that storage does not exceed 34,000 acre feet during the reconstruction of the dam.

Water stored in snow on Upper Deschutes Basin is now 90 percent above average and 50 percent above last year. Valley soils and watershed soils are well wetted in contrast to the Crooked River area where some areas in the high watershed are relatively dry.

Little Deschutes River near Lapine is forecasted to produce 100,000 acre feet during April-September. This will equal 47 percent above average.

Crescent Lake reservoir now stores 54,000 acre feet and can expect an inflow of 25,000 acre feet between now and September 30. This flow will be 82 percent above average and will be greater than the discharge of 1943.

Odell Creek near Crescent is forecasted to discharge 36,000 acre feet or 45 percent above average while the Deschutes below Snow Creek should flow 90,000 acre feet during April-September. This will be 85 percent above average and a new record.

Inflow into Crane Prairie reservoir will be 175,000 acre feet for the irrigation season or 80 percent above average.

The Deschutes at Pringle Falls will flow 350,000 acre feet and the Deschutes at Benham Falls will flow 620,000 acre feet for the April-September period. These flows are 36 and 38 percent above average respectively.

Tumalo Creek plus Columbia Southern Canal are forecasted at 62,000 acre feet or 43 percent above average while Squaw Creek near Sisters can be expected to discharge 68,000 acre feet or 55 percent above average for April-September. This latter flow will exceed all previous records for this station.

Southcentral Oregon

Water supplies will be adequate for irrigated lands of southcentral Oregon. Abnormally heavy snow pack covers the high watersheds. Snow-water content now varies from about average to 230 percent above average and from 10 to 133 percent above last year. Crop land soil moisture is very good and soils under the snow are moist to wet favoring a sustained runoff in the streams.

Silver Lake valley lands can expect very good water year with crop soils well wetted and good inflow into Thompson reservoir expected. Snow on the Silver Creek course contained 4.4 inches of water on February 1 which has melted and entered the soil without causing increased streamflow. Summer Rim snow course has about the same water content as a year ago.

Summer Lake Basin depends largely on flow of springs for its water supplies. This flow is expected to hold up well this season.

Chewaucan River is forecasted to discharge 75,000 acre feet during the three months April-June. This will equal last year's flow and equal 116 percent of average. Snow stored water on the low Mill Creek course is 11.4 inches as compared with 4.9 inches last year.

Goose Lake Valley will have adequate water, probably considerably more than last year, as the snow cover is nearly double that of a year ago. Drew's Creek reservoir now stores 46,300 acre feet and can expect a very heavy inflow in the next three months. Cottonwood reservoir has not yet begun to store water but it will easily fill when storage begins. The smaller streams contributing water to the valley both from the east and west sides can be expected to flow greater volume for a longer period than last year providing melt conditions are normal.

Warner Valley lands can expect water supplies about equal to those of last year. Flow of Deep Creek will probably equal 68,000 acre feet for April-June, and nearly the same as 70,800 that flowed last year. Twenty-mile, Twelve-mile and Honey Creeks will all produce good flows this year. Hart Lake is already nearly full and there will be sufficient water there for all purposes.

Hart Mountain Antelope Refuge lands are well wetted and streamflow is expected to materially exceed that of last year. Snow on Deer Creek course contains 11.8 inches of water compared with average of 6.6 inches and with 5.8 inches recorded last year.

Guano Creek watershed is covered with snow containing 13.2 inches of water compared with 5.9 inches last year and average of 6.0 inches. Adequate water is to be available this year.

Many desert water-holes are already filled and others will have satisfactory inflow in the next few weeks of snow-melt. Beatty Butte is reported to be completely covered with a heavy snow blanket this year at this late date.

Southern Oregon

Water supplies for irrigated lands of Southern Oregon in Douglas, Josephine, Jackson and Klamath Counties for 1949 will be adequate to abundant. Many new records have been made on the snow courses of these watersheds. Soils are well wetted under the snow and in the crop-land areas as well.

Sprague River above Chiloquin is forecasted to flow 200,000 acre feet during April-September, or about 87 percent of average.

Williamson River below Sprague River is expected to discharge 400,000 acre feet or 6 percent more than average for April-September. Last year's flow was 356,300 acre feet.

Net Inflow to Upper Klamath Lake is expected to be 530,000 acre feet or 9 percent above average. Last year the inflow was 649,500 acre feet; in 1946 it was 536,700 acre feet or about the flow expected this year.

Gerber Reservoir now stores 32,850 acre feet and can expect inflow of about 48,550 acre feet more between now and September 30. This will equal 306 percent of average. Hold-over of 35,000 acre feet is probable if melt conditions and other climatic factors are favorable. Inflow from October 1 to date has been 23,450 acre feet.

Clear Lake Reservoir now stores 172,300 acre feet and has already received 56,100 acre feet inflow from October 1 to date. The next six months should bring 83,900 acre feet more water into the big reservoir. This inflow would equal about 229 percent of the ten year average. A hold-over of around 150,000 acre feet in this reservoir will be possible with favorable climatic conditions.

Small reservoirs throughout Klamath County are generally already full or will fill. On Rogue River watershed Rogue River, North Fork, above Prospect is expected to discharge 377,000 acre feet from April 1 through September 30. This flow will be 34 percent above average and slightly more than 343,700 acre feet measured last year.

Rogue River, Middle Fork, plus Power Canal is forecast to produce 94,000 acre feet through April-September as compared with average of 68,300 acre feet.

Rogue River, South Fork, above Imnaha Creek will discharge 78,000 acre feet during April-September, or 157 percent average.

The main stem of Rogue River, below South Fork will discharge about 836,000 acre feet during April-September. This flow will be 36 percent above the ten year average which is 613,300 acre feet.

The Grants Pass Irrigation District will have adequate water this year with the low flow of the Rogue not expected to drop below 1050 c.f.s at Gold Ray. It is only when low flow drops below 870 c.f.s. that alternation of pumping into the district's canals becomes necessary.

Bear Creek Valley lands should have adequate water supplies this year with small hold-over in some reservoirs probable if favorable climatic conditions prevail. Medford and Rogue River Irrigation Districts draw their supplies from Fourmile and Fish Lakes where storage is now up to 7,280 and 5,118 acre feet respectively.

Fourmile Lake can expect an inflow of about 9,000 acre feet in the next six months or about 34 percent above average. Fish Lake inflow is measured at North Fork, Little Butte Creek (corrected for storage) and will probably be 16,000 acre feet in the April-September period. This flow will be 21 percent above average. The supplies from these two sources should be adequate.

Eagle Point Irrigation District gets its water from Big Butte Creek. North and South Forks of Big Butte Creek are expected this season to produce about 85,000 acre feet or 54 percent above average. This will provide an adequate supply.

The flow of the North and South Forks of Little Butte Creek at their confluence is expected to be about 98,000 acre feet this summer or 39 percent above average.

Hyatt Prairie reservoir now stores 8,064 acre feet and can expect an inflow this season of 7,500 acre feet or 42 percent above average. This reservoir, together with water stored in Emigrant Gap reservoir, will furnish satisfactory supplies to the Talent Irrigation District this season.

Emigrant Gap reservoir has already filled and can expect an additional inflow of approximately 11,000 acre feet or 62 percent above average.

McDonald Creek Canal, a unit serving high lands in Wagner Basin, should have a satisfactory flow until about August 25th and with favorable conditions will not be shut down at all.

Applegate River near Ruch is forecast to discharge 205,000 acre feet in the next six months as compared with an average of 116,400 acre feet. This is an abundant water supply. Low flow of the river at the mouth is not expected to drop below 25 c.f.s.

The Illinois River at Kerby will flow approximately 250,000 acre feet in the April-September period or about 51 percent above average.

Evans Creek, Grave Creek and Jump-off Joe will all have better stream flows than last year and should provide adequate water supplies in that area.

In the Umpqua Basin streamflow will be above average with forecasts listed as follows:

North Umpqua River below Lake Creek forecast to flow 168,000 acre feet in the next six months or about 12 percent above average.

North Umpqua River at Tokotee Falls - this gaging station has been removed but the forecast is furnished as a guide to the contractors at that dam site. This stream will flow about 405,000 acre feet or 19 percent above average.

Clearwater River above Trap Creek will flow about 64,000 acre feet or 9 percent above average for the ten years 1938-47.

Flow forecasts for Willamette Valley streams are listed on page 5 of this report.

The following organizations cooperate in the Oregon snow survey work:

STATE
- Idaho Cooperative Snow Surveys
- Nevada Cooperative Snow Surveys
- Oregon Agricultural Experiment Station
- Oregon State Engineer and corps of State Watermasters
- Oregon State Highway Engineers

FEDERAL
- Department of Agriculture
  - Forest Service
  - Soil Conservation Service
- Department of Commerce
  - Weather Bureau
- Department of the Interior
  - Bonneville Power Administration
  - Bureau of Reclamation
  - Fish and Wildlife Service
  - Geological Survey
  - Indian Service
  - National Park Service
- War Department
  - Army Engineer Corps

PUBLIC UTILITIES
- California-Pacific Utilities Company
- Portland General Electric Company
- The California Oregon Power Company

MUNICIPALITIES
- City of Baker
- City of Corvallis
- City of LaGrande
- City of The Dalles

IRRIGATION DISTRICTS
- Associated Ditch Companies
- Central Oregon Irrigation District
- Deschutes County Municipal Improvement District
- East Fork Irrigation District
- Grants Pass Irrigation District
- Jordan Valley Irrigation District
- Lakeview Water Users Incorporated
- Medford Irrigation District
- Ochoco Irrigation District
- Rogue River Irrigation District
- Talent Irrigation District
- Vale-Oregon Irrigation District
- Warmsprings Irrigation District

PRIVATE ORGANIZATIONS
- Amalgamated Sugar Company
- South Wasco Soil Conservation District
- The Crag Rats-Hood River-Oregon